

SECOND EDIT



DAME STEPHANIE SHIRLEY
LET IT GO

Let IT Go

Dame Stephanie Shirley

7: New Beginnings

I resigned the following morning. I gave three months' notice – much more than I had to – partly out of a sense of duty but also from a certain nervousness about the future. The idea that had seemed so irresistible the night before seemed flimsier once my resignation had been accepted.

I had decided to start my own company, selling software. That's an uncontroversial sentence, written nearly 50 years later. At the time, it sounded mad.

Drawbacks included the following. I had no capital to speak of. I had no experience of running a company. I had no employees, no office, no customers, and no reason to believe that there were any companies out there with any interest in buying my product. Nobody sold software in those days. In so far as it existed, it was given away free. Only the most forward-thinking and well-resourced organisations invested at all in what would now be called information technology, and those that did so would generally have been outraged at the suggestion that, having forked out a hefty sum for a new computer, they should also be asked to pay for the code to make it do what it was supposed to do. They expected that to be thrown in for nothing, as the manual is for a new car.

But I knew, as everyone now knows, that the capabilities of a computer are defined not by its solid parts but by the code that runs it – in those days, huge reels of punched tape. If a company wanted to improve its efficiency by using a computer, what mattered wasn't the hardware it bought but the programme – the software – that told it what to do. I cannot honestly pretend that I foresaw how huge the software industry would eventually become. (The combined global market for operating systems and applications is estimated as I write to be worth around \$300bn.) My motivation had more to do with the sheer pleasure of working with computers. But I also had a gut feeling that there was a programming industry of some kind waiting to be born, and I liked the idea of being in at its birth. I knew that I was good at programming, and that there was only a relatively small pool of people in the UK who were. At the very least, I thought, I ought to be able get enough freelance assignments of my own to be able to

earn a living, from home, without having to be an underling in a male-dominated company. As an added attraction, such a way of working might well be compatible with raising children, which Derek and I hoped to be doing before too long.

The great thing, from my point of view, was that writing a computer programme required neither resources nor infrastructure. It was a very time-intensive business, in which the code had first to be written out as a sequence of logical commands – the difficult bit – before being converted into digital code that could be expressed as punched holes in a strip of tape. But all you needed, for the most part, was pencil, paper and a brain good enough to imagine how complex tasks could be reduced to a series of logical steps. This meant that I could work from home – or, if necessary, on clients' premises – without splashing out on equipment. It also meant that, if all went well, I could hire other programmers, on a freelance basis, for particular projects, and they could do the work from their homes. My new company's name, Freelance Programmers, described exactly what I intended it to do.

Several of my colleagues, told of my plan, laughed openly; I presume that the rest laughed in private. Not only was the plan mad. There was also the awkward fact that I was a woman. Whoever heard of a woman running a company – unless it was a little tea-shop, or a cottage enterprise selling hats? One or two added that, even disregarding my gender, I was surely too brittle in temperament to survive in the unforgiving business jungle.

None the less, I was determined to give it a try. There seemed to be so much potential: not necessarily for making money, but for translating the various challenges that organisations faced into problems that could be solved by a computer. Logistics, planning, management, automation – anything and everything seemed capable of being made to run more smoothly with the help of a well-thought-out programme. Anything seemed possible.

I was 29 years old, and, while I could hardly have been less qualified for the task, I did have the crucial asset of unlimited enthusiasm. Marriage to Derek had given me a sense of stability and security that allowed me to take risks. I loved the field I worked in, and I felt a bright, joyful, optimistic passion for the business that I had imagined.

Making money scarcely featured in my list of motives. If all went well, I would earn a living; if the worst came to the worst, I had Derek's

salary to fall back on while I found another job. What I wanted was not wealth but a workplace where I was not hemmed in by prejudice or by other people's preconceived notions of what I could and could not do – a place where, instead, I could exchange ideas freely with likeminded colleagues. And in 1962 that meant an entirely new kind of workplace.

Luckily, I was in a position to create one; in fact, my lack of assets gave me no alternative. I had £6 of capital, a dining-room table, a telephone (with a party line shared with a neighbour who, luckily, rarely used it), and one other mad idea: those who worked for me would all be women, employed on a freelance basis and working from home.

I'm not sure when this women-only principle first occurred to me. It hadn't been part of my initial idea, and, in the early months, it was hardly relevant. I had imagined that the world would beat a path to my door – I was reasonably well-known by then in what was a pretty tiny industry. But it didn't. And when I did eventually get a contract – from the new UK division of the US management consultants, Urwick Diebold – it provided enough work for just one person: me.

But the issue of gender kept recurring. For example: I needed my husband's written permission before I could open a bank account. (Women weren't allowed to work on the stock exchange then, either; or to drive a bus, or fly an aeroplane.) And the letters that I eventually started sending out to other companies touting for business received so little response – not even an acknowledgement, usually – that I began to wonder if the fact that I was a woman had something to do with that, too. Almost immediately, therefore, I felt that I needed to succeed not just for my own benefit but in order to prove a point on behalf of women generally.

Then another, related issue came up. The Urwick Diebold project lasted about eight months. I got it via a former fellow employee of CDL, David Lush, who had joined Urwick Diebold some time earlier. He introduced me to a colleague, Kit Grindley, who was setting up a programming group in the company's new computer consultancy division. The brief was to write software standards – in other words, management control protocols – for this group. This wasn't exactly the kind of work I had had in mind for my enterprise, but it would prove immensely valuable in the long run. Programming was (and is) a maddeningly hard-to-pin-down activity, whose practitioners are

notorious for claiming airily that there are "just a couple more bugs to sort out" while uncomprehending clients fret about missed deadlines. The fact that Freelance Programmers could claim to be a source of objective, written standards would ultimately prove to be a major selling-point for us, and would help demonstrate to prospective clients that we were no mere fly-by-night operation.

But the crucial thing about that first project in the short term was that, halfway through it, I realised that I was pregnant. This wasn't exactly a surprise. We had been planning to start a family, and my dreams for our future usually included four or five children in the background. But the actual approach of a real birth date put things in a less forgiving light. Could I really cope? Could the business cope with such disruption so early on? And what would potential clients – who felt dubious enough about my being a woman – feel about doing business with a heavily pregnant woman? ("How many people do you have working for you?" my ex-boss asked me around this time. "One (ha.) and a bit," I replied; but I didn't tell him what I meant.)

I finished the Urwick Diebold job with just a few weeks to spare. I remember visiting them towards the end of it and having serious difficulty climbing the stairs to their second-floor office opposite Victoria station. I had earned £700 from it: much less than I would have earned in that time had I remained an employee. It occurred to me that I would need to do something about my pricing – just as soon as I had dealt with the more immediate challenge of giving birth.

Giles was born on 9 May 1963, in Amersham cottage hospital. It was a traumatic, 24-hour labour: at one point a nurse complained that my screams were frightening the other patients. But Giles himself was the most beautiful, adorable baby you could imagine. It was daunting being at home alone with him for the first time, and I remember crying a lot on my first days back from hospital. But we bonded quickly – all three of us – and I couldn't possibly have imagined leaving him with someone else in order to go and work in an office. As I didn't have an office, the issue didn't arise. But what about my business? Would I let it fizzle out after just one job? Or would I find a way to keep it going?

For about three months, I hardly cared: I was too busy being a doting mother. Derek would come home in the evening and ask me about my day, and I would struggle to think of anything I had done. The rigmarole of feeding and bathing and cuddling and playing – not



Probably the happiest days of my life. Giles was thriving at 3 months and we had no inkling of the problems ahead.

to mention washing nappies and hanging them out to dry – seemed to fill every waking minute. And if I paused for a moment to gaze into my son's bright eyes, or to contemplate the sheen of impossibly soft and delicate fair hair on his head, I wondered how anyone could ever have suggested that motherhood might be boring. For me, it was utterly absorbing, and I felt a sense of completeness that I had never felt before.

Then, gradually, my enthusiasm for work began to return: not instead of my enthusiasm for Giles but as well. Giles was not just a beautiful baby but an easy one. He ate enthusiastically, warbled quietly in a beautiful treble voice, and spent a lot of time sleeping. I found that it was relatively easy to write letters and work out proposals in between looking after his needs, and before long I felt confident that he and Freelance Programmers could be nurtured simultaneously. A former colleague at CDL asked me to do a fairly straightforward project, which I appreciated (but would have appreciated even more if they could have managed a less miserly fee). Before I knew it, I was working more or less full-time again.

Neither my mother nor my mother-in-law could understand why I wanted to go back to work. Nor could most of our neighbours. "Why? Hasn't Derek got a decent job?" was one comment. Derek took a more practical attitude. "I understand that babies make a lot of washing," he said. "If you're going to be working, we had better buy one of those new automatic washing-machines." It was the only thing we ever bought on hire-purchase – and a much larger investment than anything we had so far put into my new company. It was also one of the best investments I ever made.

Then another project came in, from a City company called Selection Trust, who wanted a Programme Evaluation Review Technique (PERT) carried out on a computer they had purchased. I was too busy with the Computer Developments project, and with Giles, to do this myself, but I hated to turn work down, so I found a freelance programmer, a very nice lady called Ann Leaming, to do most of the work for me, while I just managed the project. I paid her 15 shillings (75p) an hour, and charged Selection Trust a guinea (£1.05) an hour, which sounded suitably grand.

In fact, both projects were laughably under-priced, to the extent that it scarcely made business sense to be doing them at all. But at least

we were gaining experience in new kinds of work – PERT projects, in which you analyse the tasks involved in completing various processes, would form a significant part of our future business. And at least I was no longer just a one-woman operation. My company was doing what its name implied.

By the end of 1963 I felt confident that the business could expand. In fact, I felt confident about everything. I remember looking at Giles, and thinking of him and Derek and our home and my exciting new company, and concluding that I must be the luckiest person in the world.

But feeling confident was one thing. The problem remained of how to develop the business. All our contracts to date had come through former colleagues, and these would soon be finished. There would be no more work for us to do, unless I could somehow sell our services to the wider world. Meanwhile, the financial situation was worrying. I remember bursting into tears on receiving an income tax demand, based on my previous salary, for £600 – that is, for 85 per cent of what I had earned in the 1962-63 tax year. Another year like that and I would be ruined. Somehow, urgently, Freelance Programmers needed to expand.

I had already spent most of our starting capital on some smart headed notepaper, with the words “freelance programmers” all in lower case (partly in deference to the design trends of the day but also as a pun: we were a company with no capital). I had also taken steps to make us sound more like a proper business – and less like a cottage industry – by removing the words “Moss Cottage” from our address. I remember posting empty envelopes to myself from various locations, addressed simply to “Freelance Programmers, Ley Hill, Buckinghamshire”, to check that they would reach me.

And I had hired a local lady, Barbara Edwards, to provide half a day week of secretarial assistance, so that I could be certain that my letters would go out looking as though they had come from the chairman of a blue-chip company. She used to come to Moss Cottage on Wednesday afternoons with her own baby, and we would help one another out with childcare as circumstances demanded.

But still my letters failed to produce a response, until Derek suggested that maybe the problem lay not with the letters themselves but with the signature at the bottom of them. Given my experience

with previous employers, it was not unreasonable to speculate that many potential customers, seeing the words “Stephanie Shirley” at the bottom of a letter, would refuse to take its proposals seriously, simply because I was a woman.

Derek suggested testing this theory by signing a few letters “Steve Shirley” instead. I did so, and people began to respond. I have been Steve ever since.

Around that time – on 31 January 1964, to be precise – my little enterprise got a mention in a feature in the *Guardian* about a strange and exotic modern phenomenon: women who worked in the then embryonic computer industry. The article, by Maureen Epstein, was headlined “Computer women” and described how a growing number of women who had decent maths qualifications plus “patience and tenacity, and a common-sense sort of logic” were finding employment opportunities as programmers. “Much of the work is tedious,” she wrote, “requiring great attention to detail, and this is where women usually score.” I’m not sure what women who read the article would have made of this analysis, but one paragraph that clearly struck many of them mentioned a “Mrs Steve Shirley, of Chesham, Buckinghamshire” who “has found that computer programming... is a job that can be done at home between feeding the baby and washing nappies. She is hoping to interest other retired programmers in joining her in working on a freelance basis.”

This unexpected piece of free publicity provoked a flurry of enquiries from would-be programmers, some of whom had worked in the industry at quite a high level before “retiring” to have children. It really marked the beginning of what would become a “panel” of highly qualified freelancers. It also encouraged a certain amount of interest from prospective clients – as did a small advertisement I placed in *The Times* around this time, seeking two home-based programmers and describing the opening as a “wonderful chance, but hopeless for anti-feminists”. It was hard, however, to translate these initial enquiries into firm orders. People got cold feet when they phoned and heard Giles crying in the background. I dealt with this by making a tape-recording of Barbara typing and playing it whenever the phone rang. Then there was the problem of going in to meet someone and – once they had got over the shock of discovering that I wasn’t a man – suddenly finding myself the object of unwanted sexual advances. It is hard to sell

software when you are having your bottom pinched. And that is what the business world was all too often like in those days.

But bit by bit offers of work began to trickle in. The great thing in our favour was that we had scarcely any competitors. Once we could show that we were a reliable enterprise that had done demonstrably valuable work for serious customers, then even quite large companies were willing to give us a try. Several of our early clients were US businesses, who were more at home with the idea of outsourcing, and I went out of my way to target the Anglo-American market. But gradually we began to build a British customer base as well. Our revenues for the 1963-4 tax year reached £1,700 – still less than I had been earning at CDL but none the less a significant improvement.

1963-64
But expansion brought headaches of its own. The fact that other people were now writing software on my behalf made me worry about public liability. What if someone's work went wrong? It takes only the tiniest of errors in the coding to cause a software programme to work in a dramatically different way to the way intended. As the projects that came our way grew bigger – we were even in discussions with GEC about a system for a new aircraft – so the potential for making a catastrophically expensive mistake grew bigger too. I made enquiries about professional indemnity insurance, and was quoted premiums that would have wiped the company out. It made more sense, I realised, to incorporate Freelance Programmers as a limited liability company. On 13 May 1964, therefore, I paid £15 for an "off-the-shelf" company registration, and the business became Freelance Programmers Limited.

This was a huge step forward. Not only did it ease my worries about indemnity by limiting our liability, but it also felt, in an odd way, like officially laying a foundation stone. That "Limited" somehow made the whole operation seem more solid, more credible, more real – both to our customers and to me.

Minute Number One in the company's minute book stated that our purpose was "to provide jobs for women with children". Later on, when we began to give more thought to the need for training and development, we changed this to "careers for women with children". Later still, when I realised that many of the women I was employing were caring for elderly relations or disabled partners, it was amended again to "careers for women with dependents". But the main point never changed: this was a company that would offer opportunities

to the kind of women whom traditional male-dominated companies considered unemployable.

I don't think I had started out with such a clear-cut social purpose. I had merely imagined a workplace undisfigured by traditional male sexism. Yet a pro-woman policy made obvious sense. Talented female mathematicians had been passing through the universities in increasing numbers ever since the War, and gaining good degrees. Many of them had worked for a while in Britain's nascent IT industry, only to drop out – of the job and the job market – either on marrying or on having children. And, since most companies were far too rigid and male-dominated to adapt their ways of working to suit such employees' convenience, their skills and intellectual energy had been going to waste. By committing my company to making use of this pool of untapped talent, I gained privileged access to some of the best programmers in the country. (Many came from IBM, where part-time systems engineers were simply not allowed.) Not only were these women good: they were delighted to be working for me and determined to make the most of the opportunity.

Perhaps as a result, the company thrived. There were still plenty of potential clients who refused to take us seriously because we were women, but for others it was, if not a positive selling-point, at least a reason for not forgetting us. Our client-base grew slowly but surely. We got a job working for Tate & Lyle, helping to optimise the scheduling of the lorries that carried their sugar around the UK. (Decades later, I still feel a stab of panic if I see a Tate & Lyle lorry on a country road, in case it is lost.)

Our PERT project for Selection Trust led on to a series of other PERT projects, some of which were quite substantial. We were hired by Mars, the confectionery company, to improve the efficiency of their production processes. Their UK base was in Slough, which I used to visit by bus. I remember agonising about the ethics of accepting the goody-bags full of chocolate bars that they always used to press upon me when I left. (This issue arose with Tate & Lyle too. Each of us who worked on the project was given a 6lb tin of their famous black treacle. I have only just finished mine.) And so it went on. Imperceptibly, and unintentionally, we were becoming much more than freelance programmers. We were becoming experts in logistics and operational research.

British Railways was another big early customer. They commissioned a major study of their nationwide freight scheduling. This required me to make several journeys to Doncaster, by train. They always provided me with a first class rail warrant, which eased the strain considerably. It also encouraged me to feel that I was a serious businesswoman.

There was, however, a drawback. I still hadn't the slightest idea how to run a business. I understood software, and I knew how to work – hard, and in an organised manner. But I hadn't a clue about how to run a company. Even the basics of administration – how to register, how to make contracts of employment – involved a steep learning curve, while more subtle skills, such as managing cash-flow, eluded me completely. I didn't even know that the issues existed, let alone that I needed to master them.

As our workload expanded, this became a serious problem. We were being paid to do more and bigger projects, and each project was in itself profitable, yet we never seemed to have enough money in the bank. Sensing that something was wrong, I decided to invest in some expert advice, and asked the consultants of Urwick Diebold (by now a satisfied customer) if they could help. They sent out Kit Grindley, the manager who had liaised with me on the standards-writing project.

He came over for a morning – or more than a morning, as it turned out, although he only charged me for half the day, which was all I could afford. (They charged a terrifying £150 a day.) He looked through what passed for my books and was simultaneously impressed and horrified. I was, he explained, on the point of having to close the business down: there simply wasn't enough cash to pay the freelancers at the end of the month. This seemed mad to me: we had far more money coming in than going out. But the incoming money hadn't come in yet, and wasn't coming in quickly enough.

But Kit – who later became an influential professor and IT consultant – could also see that the business itself was fundamentally sound. The organisations that owed us money, or with whom we had signed contracts for future work, could in no way be described as credit risks. (Other early clients included Rolls-Royce and GEC.) There was clearly a market for what we did, and our long-term future looked astonishingly bright. So he got out his chequebook and, there and then, wrote out a personal cheque for £500 to tide us through. It was an act of generosity that I have never forgotten, and also an example,

which continues to inspire me, of the power of intelligent lending. We paid him back rapidly, as I'm sure he never doubted we would; and that cottage industry that he saved went on to become a multinational giant. But without that timely loan, all of our potential and inherent strengths would have come to nothing.

8: Growing Pains

After this, I made a serious effort to educate myself in business matters. But none of the books I found seemed to take much interest in the kind of business I was running. They focused on things like production and logistics and theories of manufacturing efficiency. The idea of a service industry – which is what we were – barely existed in those days. I also considered doing an MBA, and got as far as making inquiries at Harvard before concluding that the disruption to our family life would be too great.

Then I met a local academic, Jack Bungard, who lectured in business studies at Watford College (later the West Herts Management Centre), and an idea occurred to me. Surely, I suggested to him, a theorist of business must need real-life raw material from which to draw his conclusions? So why didn't he come in and treat my business as a case study – free of charge? He did, and the arrangement worked well for both of us. In the course of an attachment lasting many months, he got a front-row view of the birth pangs of a very modern kind of company. I got the benefit of a high-powered consultant with years of top-level experience of how companies usually work. He taught me many things, the most important of which – based on sitting in on various unsuccessful pitches – was how to sell. He taught me to rein back my instinctive desire to show off my insight and technical expertise and, instead, to listen. If clients expressed doubts about my proposals, he explained, it was no good my simply telling them they were wrong. I needed to respond to their worries: to take on board what they were saying and modify my proposal to fit their needs.

I listened. I learnt. I became better at selling and better at running the company – and the work began to pour in. Following Kit Grindley's advice, I began to link payments to programmers to the jobs they had worked on: when the client paid, we paid. (He called this "gearing".) This felt a little mean at first – although we did offer the safety-net that if the client hadn't paid within three months we would pay anyway. But it did do away at a stroke with 90 per cent of our cashflow problems – and, as a result, with the risk that we would suddenly go out of business.

Our lack of financial muscle was, on the whole, an advantage. We had access to a small bank overdraft, thanks to Derek's secure salary and an old-style bank manager called Mr Priddle, but there were next to no fixed assets. So we grew only when our market grew. I hired people only as I needed them, to work from home on specific projects. Many of them became regulars, but only on the basis that the relationship was a mutually satisfactory one. Some didn't want to work all the time – usually because of family commitments – but liked being on our books because of the interesting and rewarding work it provided when they were available. (There wasn't much other interesting part-time work that a woman could do in those days.) Even our project managers – essential for the growing number of larger projects, on which several programmers worked simultaneously – were hired on an ad hoc basis, working from home at whatever times worked best for them. We didn't call it flexi-working, because the term didn't exist, but in due course that concept was to become one of our defining characteristics.

In fact, there were some people who preferred to work away from home, which meant that, after a while, Moss Cottage became very crowded. There were three of us working there on a regular basis, plus Barbara on Wednesday afternoons, plus her baby, plus mine. We usually had two people working in the lounge, with a third in the spare bedroom. There were boxes of files piled high on the piano, and Derek had to make a special collapsible table for the spare bedroom – we had to take it down whenever we wanted to open the cupboard. The photocopier occupied most of the bathroom. In fact, it was a man who had come to service the photocopier who first put the idea into my head that we should get a proper office. He had just been doing a job for a company in Chesham, in Station Road, which was vacating its premises, and he thought they would suit us perfectly. I decided to look into it.

But it was hard to find the time. The need for new clients meant that I had to respond to every enquiry. Most of my meetings took place on Tuesday afternoons, which was the only time I had a babysitter. I funnelled as many appointments as possible into those few hours each week, knowing that – since Derek came home at 6pm – I could remain in London (or wherever the client was based) for as long as it took. But then, since most of these meetings yielded requests for more detailed proposals, there were countless hours to be found, somewhere in the

Moss Cottage, named after the moss rose in the garden, had originally been a pair of agricultural cottages; the large window dated from when it served as the village shop.



week, for preparing reports about what we could and couldn't do for different prospective clients. And, of course, I had to make sure that our existing projects were progressing satisfactorily – which could mean anything from ringing people up for reports to putting more coal on the Moss Cottage fire to keep everyone warm.

It all seemed to work quite well, and new work kept coming in. But it all felt alarmingly happy-go-lucky, even by my naïve standards. I remember us having earnest debates about how to spell "computer" and how many 'm's there should be in "program". Luckily, our clients never got to hear about this.

But one thing that did become screamingly evident as we expanded was the need for quality control. One project, involving Castrol (part of Mobil Oil), nearly ended in disaster. I hired a very high-powered programmer to do it: an Indian lady who came from Dublin University. Everything seemed to be going according to plan, except that the project was taking much longer than anticipated. Then the client began to query the amount of time that the programmer had been spending on their computer. I looked into it, and found that although the programmer in question was, unquestionably, a brilliant woman, her brilliance did not extend to being able to carry out a clearly defined task in a coherent way. Her work was totally undocumented and she didn't seem able to explain where she had got to or why. She may or may not have known what she was doing, but she appeared to have been heading off down a series of blind alleys that made sense only to herself, and I realised that I could not afford to employ her any more.

I had to drop everything, learn a computer language (FORTRAN) that I had never used before, and work round the clock for two weeks trying to unpick the mess she had made. Amazingly, I succeeded – largely because Derek was able to take two weeks' leave from Dollis Hill and look after Giles. But by the end of it, after nearly a fortnight of 18-hour days, I was close to collapse. The project was rescued, however, and we retained our crucial record of having nothing but satisfied customers. Kit Grindley later told me that it was at this point that he knew that Freelance Programmers would succeed. I, meanwhile, was beginning to wonder if starting my own company had been such a good idea after all.

One beneficial effect of the Castrol debacle was that it forced us to become more professional in our approach to quality control. We

were already relatively advanced in this respect, thanks to the objective standards that I had created for Urwick Diebold, which we also applied to our own work. But only now did we develop a really rigorous system of process control. Every project was divided into phases, and at the end of each phase we would double and treble check before we moved on to the next phase. No one else in the industry could claim to have anything like such a robust system, and it stood us in good stead: not just because we developed a reputation for reliability, but because the system allowed us to be much more precise in our planning. While others were still saying "There are just a few more bugs to be ironed out", we could say "The job is now 60 per cent done and will be finished in another 10 days.". This precision also allowed us to offer fixed prices on our contracts, which was attractive both to clients and to us.

In the short-term, however, I had taken home a more negative lesson from the Castrol episode. Running a company was a headache. Even after two short years, I was beginning to encounter the familiar paradox that at one stage or another demotivates most people who start their own businesses: I had begun to delegate much of what I loved about the business – writing software and designing systems – while filling my time with all sorts of administrative, financial, legal and managerial chores for which I felt next to no enthusiasm. Instead of welcoming each new project as an exciting new challenge, I was starting to see new assignments as potential disasters waiting to happen – and the bigger the contracts grew, the greater the potential for disaster.

I still retained most of my enthusiasm, but I was sufficiently jaded with the management side of things to feel a huge surge of relief when, towards the end of 1964, one of our clients, a company called Business Operations Research (BOR), announced that they wanted to buy us. It seemed too good to be true. They would put up the money, but I would retain day-to-day control. They would pay me a salary – something I hadn't had since the company started. And they would provide investment capital, and pay for offices and other support. All the administrative responsibilities that had been weighing me down would be taken off my hands, and I would be free to return to doing the work I loved.

If it had worked out, I would never have become rich. But becoming rich had never been one of my aims. All I wanted was the freedom to

do what I was good at: that is, to explore the potential of information technology for transforming the way people worked. I had never dreamed of fast cars and huge houses. Rather, my ideal was to be part of some kind of high-powered creative commune, full of free, kindred spirits, held together not by rules and conventions but by our shared joy in what we did. It was the business itself, not its potential for generating profits, that I cared about.

The proposed takeover was thus a highly attractive proposition. It took a long time to sort out the details, but, in the meantime, I went out and, on the strength of the provisional agreement, rented the vacant offices that the photocopier repair man had recommended, at 16 Station Road, Chesham. I hired three full-time employees, and, since they all had young children, took steps to ensure that the office incorporated a crèche.

Then something odd happened. I mentioned to our would-be purchasers that I was going to register the crèche through the proper channels. "Oh no," said Don Neville, the man at BOR I was dealing with, "you don't want to do that." But, I insisted, we must do things properly. "No, no," he insisted. "You mustn't. That sort of thing's a waste of time and money." And I realised that, as my owner-to-be, in control of the future purse-strings, he was in effect giving me an order – and was telling me to do something that seemed to me to be wrong.

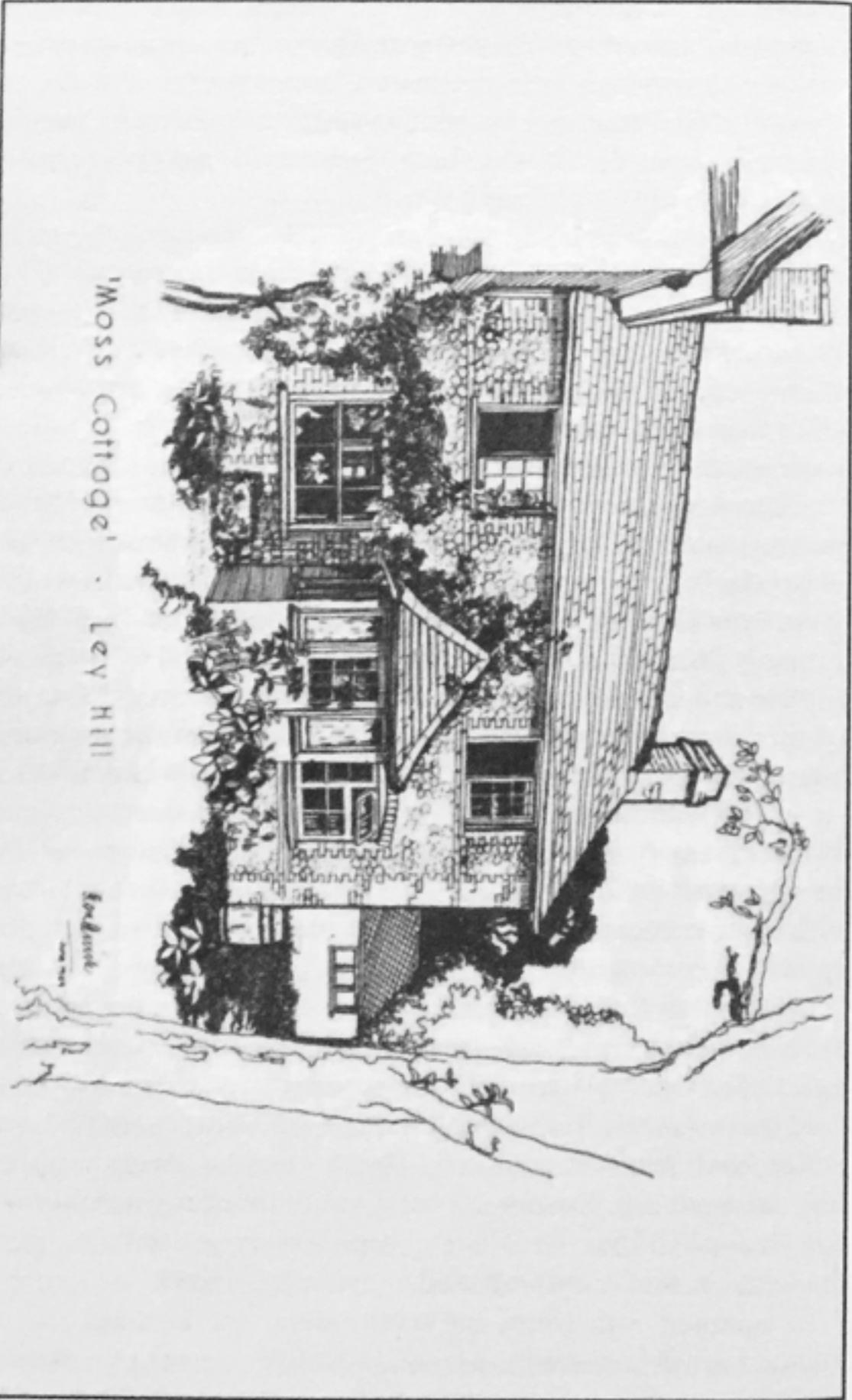
Suddenly the proposed takeover appeared in a different light. Selling the company, I realised, wouldn't just mean offloading the various administrative and financial chores that I found so tiresome. It would also mean relinquishing the very independence that had prompted me to start the company in the first place.

I told them that the deal was off.

Any satisfaction I felt in having taken a stand on a point of principle evaporated when I considered what a mess I was now in. I had commitments to three employees, a commitment to rent our new office, contracts with numerous clients – and, suddenly, no money to pay for anything. It was a critical point in the company's history. Did we give up? Did we – or I – scale back, or renege on the commitments I had just made? Or did we find the money from somewhere else?

I agonised with Derek for several days. The first two alternatives seemed sensible but unacceptable. I had been trying, in some vague way, to run the business honourably and decently. It would have

We lived in this impractical but idyllic home for 8 years.



'Moss Cottage' - Ley Hill

broken my heart to have let my little workforce down. And it would have broken my heart, too, to have abandoned a business that had so much going for it and that seemed so close to turning my vision into a reality.

At the last possible moment, we made our decision. We would make it work. We re-mortgaged the house – for £1,600 – and, in effect, funded the expansion ourselves.

This was frightening stuff. If things went wrong now, we faced something close to ruin; we would, at best, have been back in a bedsit. But this very scariness was, I think, crucial to our subsequent success. When everything you possess is on the line, you tend to find reserves of drive and commitment that you didn't know you had when you were less exposed.

Steadily, we made things work, although it seemed sometimes to be as much by luck as by judgement. There's a sense of inevitability to the growth in our revenues when you look back at the figures today: £7,000 in 1964-5, £17,000 in 1965-6, £35,000 in 1966-7. But that's not how it felt at the time. We were an almost ludicrously minimalist organisation, with three managers and a secretary operating from our bare offices above the opticians while I flitted about between Moss Cottage, the office and the headquarters of various clients and potential clients. There were also many local freelancers who were so closely involved as to be to all intents and purposes part of the business. An example that springs to mind is Pam Elderkin, a high-powered technical person who lived just down the road in Chalfont. When I had drafted the main outlines of a proposal for a project, I would pass it on to her to assess its technical implications. I rarely got a chance to work on proposals without interruption until the evening, and so I tended to drop my drafts through her letter-box in the small hours of the morning. She could then start on them the moment her husband left for work, and would have finished them, returned them and cleared away all traces of her work before her husband returned in the evening. I presume that he knew that she worked – but I don't think her neighbours did.

I hate to think what some of our blue-chip clients would have thought, if they had fully taken in the fact that the expensive, sophisticated, state-of-the-art computer programmes they were buying from us were being created at home by women surrounded by babies and nappies. Yet there was a steely professionalism underlying

seemed to match our demand for work. By 1966, we had relationships with (as I have already mentioned) about 75 regular freelancers, of whom some were working more or less constantly while others were happy to go for long periods between assignments. This meant that we never had to turn business down because of lack of capacity – a huge bonus for a growing enterprise. The only job I can remember turning down was a proposal from a company called EMCON (Economic and Mathematical Consultants) for designing an automated fingerprint recognition system. I simply couldn't see how it could be done (and, indeed, it would be 20 years before anyone else cracked the problem).

It worked in our favour that there was scarcely any other part-time work available in those days that offered the slightest intellectual challenge – and most women, then as now, had at least a stage in their lives when part-time work was the only kind of work they could do. For intelligent, numerate women in mid-1960s Britain, Freelance Programmers was a godsend. (And not just in Britain: I even had an enquiry from a Middle-Eastern potentate wondering if we had any opportunities for women in his harem.)

One key recruit around this time was a case in point. Ann Leach (later Moffatt) had been working as a programmer for about six years, mostly for Kodak, for whom she had programmed a Ferranti Pegasus (the same early computer that I'd used for testing ERNIE) to determine optimum strategies for streamlining production process, locating distribution centres and optimising products to match market demands. She had also worked on loan for Ferranti themselves, for whom she had helped create the pioneering operating system for the Atlas computer (the forerunner of the IBM 158). She was, in short, one of Britain's top programmers. But she had become disillusioned when, as she saw it, the traditional male managers at Kodak realised what an impact computerisation was having on the company's balance sheet and began to muscle in on the territory that she had opened up. Programmers like Ann were in effect pushed down the hierarchy, to be ordered around by self-serving corporate types who knew far less about software than she did. She had left Kodak when her first child was born, in early 1965, but now was looking for interesting work again. Freelance Programmers met her needs perfectly.

But she met our needs perfectly too. We had just been given a large contract by GEC to write programmes that would analyse the

"black box" flight recorder for an exciting new aeroplane, then under development, called Concorde. The software – for two purpose-built computers – needed to perform statistical analyses in the outputs of some 40,000 different instruments on the plane. Ann was one of the few people in Britain capable of leading such a project, and she did so very successfully, completing the £40,000 assignment on time and slightly under budget.

Our programmers weren't especially well-paid on an hour-for-hour basis. But the quantity and the quality of the work meant that they generally did well out of the relationship. One very respectable lady was suspected by the Inland Revenue of being involved in some kind of vice: they couldn't imagine how else she could earn what she was earning without leaving her home. In fact, Suzette Harold – who would later play a crucial role in the company's growth – was one of the most upright and respectable people I have ever met. But the Inland Revenue was even more male-dominated than the computer industry. Both groups of men were too blinded by prejudice to notice the obvious: that many of Britain's most brilliant and reliable programmers were female. This general blindness was our opportunity.

In fact, not quite everyone who worked for Freelance Programmers was female. One valued early employee was Jim Hawkins, who had previously been personnel manager at CDL. A former Army officer, he had left that job after suffering a nervous breakdown, and had feared that, despite his subsequent recovery, he would never work again. But I had admired his conscientiousness and honesty, and when I needed someone to oversee staffing matters I offered him a job. He was deeply moved and repaid me with three vital years of dedicated and sometimes inspired service.

Another male employee was John Stevens, whom I hired in 1965 as our first full-time project manager. John was a would-be Liberal politician who had taken up programming because he thought it would provide him with employment in between elections. I had first met him when I needed a crash-course in FORTRAN for the Castrol project. He now became an influential colleague and friend. A passionate believer in the extension of share ownership, he contributed a new strand of idealism to our already rather utopian enterprise, opening my mind to the idea that there were other ways of structuring a company beyond the traditional top-down proprietor-staff relationship. Ultimately,

the ideal of staff ownership that he explained to me would become as central to the company's ethos as the empowerment of women, although this was still many years away. But John's radicalism, combined with my innocence, did mean that, even then, our company worked in a very different way from what was then the norm.

Elsewhere in the industry – and indeed in British business generally – people were still clocking in and out, and having their pay docked if they took too long over their lunch break. We paid people for the work they accomplished rather than the hours they put in. Compared with a conventional company, we were treating our freelancers like adults: trusting them, as intelligent, motivated people, to make the best use of the time available to them in order to achieve the goals they had been set. In modern management-speak, they "owned" the projects that had been assigned to them – which was a relatively small step from the idea that they should also participate in the ownership of the company. We introduced our first profit-sharing scheme in 1966.

I think my receptiveness to John Stevens's idealism may partly have been prompted by guilt at the changes that I had been forced to introduce to the way we paid people. My instinct still told me that it was fairer to pay people once they had completed the work they had been hired to do, rather than "gearing" the payment of their fees to the clients' payment of our fees. I knew that there was no realistic alternative to gearing, but I felt better about it when I knew that our freelancers also had a stake in the financial well-being of the company.

I suspect, however, that the most important factor that shaped Freelance Programmers in its early years was, simply, my naivety. Deep down, I still didn't know what I was doing. Not knowing what the rules were, I was free to innovate – as, indeed, was everyone else involved. Our long-term patterns of flexible home-working and remote management came about not just from theoretical idealism but also from practical necessity. They evolved because they were what worked. Paying for work done rather than hours worked made it easier to cost projects in advance; trusting people to manage their own time was not just effective but considerably easier than trying to keep control of every detail of every project remotely. It helped that there were so many high-powered programmers out there, who were available simply because more conventional companies disliked employing women with dependants. It also helped, I think, that they were women

– who traditionally take responsibility for running family and home and, as a result, tend to develop finely honed self-management skills.

We had a collective naivety, too, which on balance worked in our favour. Pointed musings by potential clients about cars and holidays fell on deaf ears because none of us realised that they were intended to elicit bribes. We didn't get the business in question, and we were better off without it. Another time, we blew the whistle on a senior civil servant who explicitly asked for a bribe while we were negotiating for a contract with the Department of Health; it was a long time before we got any more work from that quarter. It never occurred to us to behave otherwise. We were normal, decent people, and no one had told us that, in business, many people feel that the normal rules of decent behaviour don't apply. The consequent short-term loss for our balance sheet was more than off-set by the long-term gain for our reputation. Another time, we were bidding with IBM to a major government department that then asked us to team up with ICL instead. We refused – and IBM were so impressed by our loyalty that they went out of their way to partner us on a number of other projects.

It is startling, looking back, to think how many of the characteristics that came to define us as a company evolved by accident. For example, we were one of the very first companies to allow job-sharing – something for which we were later much admired. We did so for the simple reason that a husband-and-wife team suggested it. "Why not?" we thought; and another innovation was added to the Freelance Programmers repertoire of employment practices.

But that was what made it such a rewarding company to work for: a lot of the things we were doing were things that had scarcely been imagined before, let alone done. None of us knew where the business – or the industry, for that matter – was going. We never looked further than the next project, asking ourselves: "How could we do this?" or "How could we do that?" And that was one of the main reasons for our success.

Of course, the more projects and programmers we took on, the more scope there was for things to go wrong. Inevitably, the bigger the projects that we took on, the more I worried that a small slip might lead to disaster. (The Concorde black box project was one that concerned me particularly in this respect.) But one of our accidental strengths was the fact that our lack of resources forced us to be

relatively conservative in our use of software. We tried to keep abreast of new programming developments, but we couldn't keep training people in every latest cutting-edge innovation. So our software tended to be tried-and-tested rather than experimental; and, as a result, we acquired an enviable reputation for reliability. We might not have been pushing back the frontiers of computer science, but we knew how to design systems, we knew how to control the quality of our work, and we knew how to run projects efficiently.

But the possibility of programming errors wasn't the only thing we had to worry about. There was also the fear that a small mistake in costing might plunge us into the red. One such mistake involved a project for Sheffield Regional Hospital Board, who paid us £16,000 for a project and were very satisfied with the result. Unfortunately (because we had agreed a fixed price, while they had kept changing their mind about what they wanted), our direct costs for the work came to more than £24,000. A few more satisfied customers like that could have killed the company off.

There was also the question of getting our customers to pay up in a reasonable time. The Concorde job for GEC was a particularly bad example of the problems we faced. They took so long over part of their payment – £20,000 of it – that eventually I was reduced to visiting their headquarters in Mayfair and demanding to see Arnold (late Lord) Weinstock, their managing director, who was notorious for being a slow payer. I made a considerable nuisance of myself but didn't quite succeed in getting into his office. But I did persuade a senior executive to take a message into him and, later that day, received his reply: "Tell Mrs Shirley that £20,000 is a significant sum for any business and that if she cares to come round tomorrow there will be a cheque waiting for her."

There was. So that was that problem sorted out. But GEC's contract was just one among many, and I really could have done without devoting whole days of my time to debt-collecting.

There were times when I simply lay awake at night worrying, but at least I was able to alleviate such worries by putting in place more rigid and robust systems – for monitoring progress, for checking quality and for controlling costs. Luckily, we were still at a stage in our development when it was relatively straightforward to do this. And, in the meantime, most of the debts came in more or less on time,

income just about exceeded outgoings, and the feared disasters never materialised. Imperceptibly, Freelance Programmers Limited was beginning to acquire the solidity of an established, reliable company.

But that was by no means the end of my sleepless nights. Unfortunately, it was not just the company that I was worrying about.

9: The Lost Boy

The catastrophe had crept up on us. It must have been in early 1964 – when he was about eight months old – that we first began to worry, on and off, that perhaps Giles was a bit slow in his development: not physically, but in his behaviour. He was slow to crawl, slow to walk, slow to talk; he seemed almost reluctant to engage with the world around him. These concerns took time to crystallise – as such concerns generally do – and the first time I went to a doctor about them I couldn't even admit to myself what was worrying me. Instead, I asked about the “funny shape” of his head – which at the time was rather flat at the back – and I remember the slightly odd answer: “It will get worse before it gets better.” This turned out to be correct. It was, however, a red herring. What I was really concerned about was not the shape of Giles's head but what was going on inside it.

This deeper worry remained unarticulated for a month or two longer. The fluctuating fortunes of Freelance Programmers gave us plenty of other things to fill our minds, and for as long as we could we tried to persuade ourselves that everything would be all right. By the end of that year, however, there was no avoiding the observation that Giles was losing skills that he had already learnt. He had talked for a while, for example. I remember that his first word was not “Mummy” or “Daddy” but “car” (which may, in retrospect, have told us something). But he had never become chatty. And now he fell silent.

Months of desperate anxiety followed, in which there seemed to be little that we could do except fret. Visits to our local GP alternated with consultations with a succession of experts and specialists. We became regular visitors to The Park, the children's diagnostic psychiatric hospital in Oxford; and, later, to Great Ormond Street Children's Hospital in London. Meanwhile, inexorably, Giles's apparent disabilities became more pronounced.

My lovely placid baby became a wild and unmanageable toddler who screamed all the time and appeared not to understand (or even to wish to understand) anything that was said to him. He no longer showed any interest in either me or Derek, and never once raised his arms to be picked up by either of us. His only interests seemed to be bouncing up and down – he destroyed two cots in quick succession –

and tearing paper (books, newspapers, money, vital correspondence) into tiny strips.

By mid-1965 Giles had taken up weekly residence at The Park, while the doctors there tried to work out what was wrong. Nothing I can write can capture the enormity of the sorrow that that short sentence now brings flooding back to me. This was my son, my adored boy, my beautiful Gilesy – and he had been taken from me by some sinister, invisible force that I could not understand. Every day for months – even as my dreams for Freelance Programmers appeared to be coming true – I would feel as though I had been wrung out by some emotional mangle; and it was no better for Derek. Our domestic idyll was in ruins. In fact, for the first month or so that Giles spent in The Park, I spent my nights in the hospital's mothers' unit and, by day, ran my company from there – a striking if unhappy example of the flexibility that our new kind of working conferred. Eventually, the staff persuaded me to go home, saying that I should be looking after “all the family”, not just Giles. But wherever we were in physical terms, the pain, for me and Derek, felt much the same. Irrespective of any successes at work, our days were just a question of hanging on until nightfall; of feeling the waves of pain and anxiety breaking over us, but grimly refusing to be broken by them.

And there was worse to come.

After Giles had been in hospital for about eight months, the consultant at The Park, Professor Ounsted, pronounced that in his opinion Giles was suffering from a degenerative brain disorder and would eventually lose not just his speech but his sight, hearing and balance. This seemed such a horrifying prognosis that we insisted on a second opinion. So Giles found himself spending two weeks at Great Ormond Street Hospital for Children: a wonderful institution that in those days was clearly more geared to the treatment of the ill in body than the ill in mind. I stayed at a very cheap hotel nearby and spent a lot of time physically restraining Giles from tearing down the hospital's extruding electrical cables or throwing himself from its unenclosed staircases.

Finally, in mid-1966, the excellent specialists overseeing Giles's case – Professor Wolff and Dr Bentovim – delivered the devastating but unarguable verdict: our son was profoundly autistic, and would never be able to lead a normal life.

In the 45 years since then, I have learnt more than I would ever have believed possible about this perplexing disorder. I have read hundreds of books and thousands of articles about autism, and have consulted experts in the subject from all over the world. It has become, in a sense, the dominant theme of my life. (I have even funded research into autism spectrum disorders at The Park.) Back then, however, "autism" was just a word, conveying little meaning to us, apart from some vague, horrible idea of "mental handicap".

We soon learnt more, and everything we learnt was like a skewer in our hearts. People with autism have an impaired capacity for social interaction and communication. They are prone to restrictive, repetitive and destructive behaviour. Unable to make real sense of the world, they cannot form viable human relationships. They are at increased risk of other brain disorders, such as epilepsy. Many have lost the power (or habit) of speech. Scarcely four per cent go on to achieve a degree of independence in adult life.

It was as if all our hopes and dreams for Giles's happiness had been snatched from us and trampled on.

Shock was compounded by guilt. Every parent of a sick or disabled child is tortured by the thought that the problem might somehow be their fault. With autism, the medical orthodoxy of the day stated clearly that it was the parents' fault. Leo Kanner, director of child psychiatry at Johns Hopkins Hospital from 1930 to 1959, had famously proclaimed that the condition was caused by cold, unloving "refrigerator mothers"; a theory subsequently popularised by his disciple Bruno Bettelheim, professor of psychology at the University of Chicago, whose 1967 bestseller, *The Empty Fortress*, would suggest that such mothers had traumatised their children by behaving like "concentration camp guards" towards them.

That theory of autism's causes has since been discredited, while Bettelheim was later exposed as a plagiarist and fraud. But we had no way of knowing that – beyond a gut feeling that the theory must be false. We had loved Giles with all our hearts – and, indeed, still did. To say that we had crippled him with our coldness simply didn't make sense. Not that that prevented us from torturing ourselves with self-reproach.

None the less, we had to come to terms with the situation. We had, somehow, to move on from agonising questions about the past to no

less agonising questions about the present and the future. We had to mourn the child that we had hoped for; to learn to love, in a different way, the child that we had; and to work out how best to look after him; and, somehow, to carry on living.

There were few helpful pointers in those days for parents in our position. One medical professional advised us bluntly that we should put Giles in an institution, forget about him and start again. The advice horrified us. Neither of us was in any doubt that we wanted to do anything that was in our power to give Giles as fulfilling a life as possible, and to communicate to him – in so far as he was able to understand – how deeply we loved him.

So back he came to Ley Hill – now aged three and a bit – to be welcomed into the chaotic, overcrowded, cheerful, low-ceilinged cottage that served as both our home and my workplace. Derek continued to work at Dollis Hill, although how he managed to do any creative scientific work there, with all this on his mind, is beyond me. I divided my time between our home, our Chesham office and the various locations to which I was taken by my role as Freelance Programmers' chief ambassador. I had back-up from a baby-sitter (one afternoon a week) and, increasingly, from Derek, outside his regular working hours. But it still felt like an enormous burden to be shouldering more-or-less alone.

Renate was sympathetic, but was increasingly preoccupied at the time with her own affairs – specifically, a lengthy on-off romance that she finally brought to an end by leaving for Australia, where, on the rebound, she married a man called Peter Tankard and (as previously mentioned) settled permanently. My mother, on the other hand, was surprisingly supportive. She was living quite near us by then, in a quiet Amersham cul-de-sac, having retired from teaching. She had quickly become besotted with Giles and remained so even when his problems became apparent. Drawing on her classroom experience, she would take him for a couple of hours a week, supervising him in pre-prepared activities such as biscuit-making that he seemed to enjoy. Her confident manner, developed through two decades of exerting authority over unruly pupils, seemed to calm him, and his wildness never exasperated her. I was grateful for this, but also, sometimes, felt slightly undermined by it: Giles, in her eyes, could do no wrong,

whereas she still couldn't bring herself to give me the approval or reassurance that I yearned for.

But it was my mother-in-law's reaction that upset me most. She and Derek's father lived in Queensbury, in what had until recently been Middlesex (now the London Borough of Brent), and we used to make regular visits. Once Giles's problems became evident, she let it be known that she would prefer it if they could come to us instead, so that their neighbours would not see Giles visiting them. Needless to say, we found this deeply hurtful and insulting. She remained far from supportive for a long time, constantly suggesting that I was bringing Giles up badly. Her husband, a relatively conventional military man, was, in his straitlaced way, more empathetic, and at some point I told him how upset we felt at my mother-in-law's attitude. He must have had a word with her, because soon afterwards she became much more understanding, and remained so from that point onwards.

My own father played no more role in this stage of my life than he had in most of the previous ones. Early in 1966 I had learnt, by chance, that he was dead: he had died some months earlier, in 1965. Maria, his second wife, had not thought to inform his first family, and it was only a passing reference in a letter from his sister Alice that alerted Renate to his passing. The news must have given me pause for reflection, but I can't honestly claim that it bothered me greatly. Our relationship had rarely been anything but distant, and I still find it hard to think of him with love. Yet I do remember him, increasingly, with admiration, and the older I get the more I feel that I have much in common with him. He cared too deeply about his work, as I do; he too was an idealist. The defining tragedy of his life – as of so many millions of other lives – was Nazism. In a happier age, he might have done great things, as a judge and perhaps as a father too. As it was, he went to his grave frustrated – even though he eventually rose to be head of both the judiciary and the police in the state of Hesse. Some time after his death, I was moved to discover that, all through his war-time exile and beyond, he had kept with him the brusque letter of dismissal that he had received from the Reich justice ministry in July 1933.

But any warmth I feel towards his memory is abstract rather than personal. The love that fuels family life is ultimately dependant on people being there for one another, and as a father he had emphatically not been there for me. I resolved that, whatever else happened, I would

be there for Giles. I had no idea then how much easier it is to make such resolutions than to keep them.

In a sense, compared with what was to come, Giles's autism was relatively manageable in those early days, when he was three or four. He was wild, and often unresponsive in what could be a desperately upsetting way. He had already taken to headbanging: bashing his head repeatedly against walls, furniture or people, which was both dangerous and agonising to watch. But he was at least small enough to be kept or snatched away from the worst troubles, and quiet enough to be able to pursue some of his less harmful interests, such as paper-tearing, without causing intolerable disruption to others. What broke our hearts was the thought of what the condition meant for his future, rather than what it meant for his present.

In due course we learnt to stop comparing what was with what might have been (including the other children we might have had), and to think instead about the difference between what was good for Giles now and what was bad for him now.

Derek was convinced that the key was getting him to speak again, but we were unable to find a speech therapist who was prepared to take him on. Eventually we settled for learning by experience how to interpret some of the noises Giles made, from the quiet hum that meant that he was happily engrossed in what he was doing to the frightening roars that indicated distress or frustration.

Meanwhile, we attempted various forms of education, with limited success. I began by taking Giles to a local nursery, St George's Hall, for two mornings a week. It soon became clear that they were not equipped to deal with such a challenging pupil. (One member of staff was sacked for losing her temper with him.) Then we took him for a term or so to a training centre in Chesham. Training centres were places where children and adults with various kinds of learning disability went for a primitive form of occupational therapy. The adults would perform simple and repetitive tasks such as envelope-stuffing in the hope that this might ultimately equip them to do some kind of productive work, while the children would be given the same kind of play-based teaching that they might have received in a nursery.

This was a heart-breaking time. The staff at the training centre appeared competent, but there was something unbearably bleak about the whole business, and I never felt that Giles was contented there. One

of my most vivid memories of this period is of going to watch the little nativity play that they put on at Christmas, after Giles had been there for about four months. I went with a friend, Jane, the wife of a former colleague, whose daughter, Suzannah, was at the same centre. We smiled politely at the clumsy efforts of the older children. Then, near the end, half-a-dozen smaller children, including Giles and Suzannah, were brought on stage on a trolley. They were all non-speakers, and none of them seemed to understand what was going on. None the less, they were dressed as angels. I wept as I had never wept before. The contrast between the sentimental "English dream" of Christmas and this cruel, botched reality was too painful to bear. Jane wept too; and, since we had both dressed up as smartly as possible for the occasion, we soon made a grotesque spectacle, with floods of mascara streaming down on to our previously immaculate blouses.

But that, I reminded myself, was my disappointment, not Giles's. All that really mattered, ultimately, was that he should be happy – or, at least, have some kind of quality of life. The difficulty was working out whether he had this or not. One of the cruel things about autism is that it is so hard to tell what the autistic child is feeling. You have to work at it, and learn to interpret often subtle signs.

One less-than-subtle sign gave me a horrible shock a month or two later. I waved goodbye to him as he was being collected to go to the training centre, and, as I raised my hand, he flinched. I realised with chilling certainty what this meant: somebody had been hitting him. He never went to that training centre again.

But the heart of the problem was not so easily solved. Giles's condition remained intractable, and, the bigger he grew, the harder he became to deal with. I didn't sympathise with our babysitter when she called him a "stupid boy". On the contrary, I resented it bitterly. But I also understood that, for any adult charged with looking after him, Giles was almost impossibly difficult. He was disruptive, destructive, unresponsive – it was hard not to become exasperated from time to time. Even I, once, in the heat of the moment, slapped him on the leg. It was meant as a warning rather than in anger: a fierce "Don't do that!" None the less, I was horrified at myself. I had never have imagined that I could ever strike a child: only a monster would do that. And now, suddenly, that was exactly what I had become.

This incident seemed to sum up the grotesque things that were happening to me and my emotions. I loved my son, and yet was tormented by the occasional thought that I would better off without him. I longed for him to be protected from pain, and yet could not help feeling resentful, sometimes, at the utter absence of any sign that he appreciated anything that I or Derek did for him. Sometimes I wasn't even sure that he knew who I was. I hated to be parted from him, and worried desperately when he was not there; yet I could not stop myself from wondering what life would be like without this all-consuming responsibility for this inscrutable tyrant.

We had long since given up any pretence of a normal, happy family life. We snatched food when we could rather than sitting down together for meals. Derek and I resorted to sleeping in shifts. (You can imagine what this did for our relationship.) But what really frightened me was how the strain was changing me as a person. Emotions and ideas that I neither recognised nor approved of seemed to pop up in my head without prompting. I even wondered, in my wilder moments, if Giles was possessed, and if I ought to get some cleric in to come and exorcise him. Another time, I wondered if I should get a sheepdog to help me manage him – at which point both Derek and I agreed that I was totally losing the plot. (Interestingly, though, specially trained "assistance dogs" are now sometimes used for precisely this purpose.)

It is painful to recall this period of my life, even half a century later. But perhaps the saddest thought of all is that there are probably tens of thousands of parents of autistic children who will recognise immediately the kind of emotional agonies I am talking about. The harsh fact is that it is almost impossible to provide a satisfactory life for a child with severe autism without expert help – and that parents who try to do so risk destroying themselves in the attempt.

Eventually, shortly before Giles's sixth birthday, we were lucky enough to find a wonderful little weekly boarding school which specialised in non-communicating children, including many with autism spectrum disorders. Called The Walnuts, it was (and is) in the north Buckinghamshire village of Simpson, near Milton Keynes. It hurt terribly to leave him there: he was so young. But the head, Janet Pratt, was an inspirational figure, and it was clear that the children there were (relatively speaking) thriving. After much agonising, we decided that it would be unfair to Giles not to enrol him there. An

ambulance used to collect him on Monday mornings and bring him home on Friday afternoons, leaving us the whole of each weekend to spend together as a family. Within a term or so he had become visibly calmer and happier.

Weekends, and school holidays, were exhausting but manageable. Sometimes it felt as though our parenting was largely a matter of containment and damage limitation; but there were also periods of relative calm, when we felt love and togetherness and even a degree of optimism. There was, for all his problems, something very lovable about Giles. He was extraordinarily handsome, with an ethereal quality that made me sometimes wonder if he was a creature from another world. At other times, I thought of him as an "innocent" – as people with disabilities like his were once called.

Janet Pratt and her colleague Judith Waterman taught him to ride a bicycle – but not, unfortunately, to brake. Derek tried to play rudimentary tennis with him. Occasionally, the chaotic results of these experiments would be heart-warming rather than heart-breaking.

But I could never really tell what Giles was feeling, or whether or not we were doing the right thing for him – especially in those early years, when the challenges of autism were new to us. So it was a relief to know that for at least some of the time he was in more expert hands than ours. And it was also fairly crucial to our survival that there were extended periods in most weeks in which, while never forgetting Giles, we could give at least a reasonable part of our brains to our work.

Quite how we did so, or how I combined all this heartache with running Freelance Programmers, is no longer clear to me. The records show that the company continued to expand, steadily and rapidly, both financially and in terms of our workforce. I invited Ann Leach to take on a more managerial role, effectively overseeing our panel of freelancers. She had a knack both for accurately estimating the work that any given project would require and for understanding the different strengths, weaknesses and working styles of our programmers. This allowed us to make the very most of our flexible workforce, and gave us a huge advantage over potential rivals. We reckoned that our programmers were forty per cent more productive than programmers in traditional companies, which made it easy for us to offer competitive prices. Meanwhile, my policy of targeting big, blue-chip clients had begun to pay off, as we were able to point to a growing number of high-profile

satisfied customers. Contracts began to pour in: from Bird's Eye, from Esso, from Littlewoods, from Stewart & Lloyds (later absorbed into British Steel), from Wallasey Buses, from Hille (the furniture people, in Watford), from Griffin & George (the scientific educationalists), from British Insulated Callender's Cables (BICC – later part of Balfour Beatty). The names may mean little today, but at the time they were instantly recognisable as some of the biggest beasts of British business. Their presence among our clients proved that we must have something serious to offer; we had, in effect, been accepted by the establishment. We had even been hired by the Government, whose Admiralty Underwater Weapons Establishment (AUWE) commissioned us to do some work on a command-and-control system.

But I remember such landmarks only dimly, through a grey fog of misery. My memories of that period are dominated by Giles. I suppose, to an extent, some of these projects would sometimes run themselves – for limited periods, at least. At other times, I would immerse myself in work to forget my pain. But I don't remember neglecting either my company or my son. I suppose that, like Derek, I just muddled on, driving myself to physical and emotional exhaustion every day with the combined challenges of work and family and then, somehow, dragging myself up to do it all over again the following morning.

I cannot deny that, at times, our marriage seemed near to collapsing under the strain. We were both so miserable that neither of us was able to give the other the emotional support he or she craved. But nor did either of us relish the prospect of dealing with this ordeal alone. So we stuck grimly together, argued a lot about what was best for Giles, and, a long time later, realised that the roots of our relationship had been stronger than we had feared. We were lucky. All too many marriages never recover from the blow of discovering that a child has special needs.

Nor can I deny that, at times, work was a relief from the trials of parenting. It wasn't that I didn't want to be with Giles, or to think about him. It was just that it was refreshing to immerse myself in problems to which I could usually find a satisfactory solution – in contrast to the terrifying and heartbreakingly intractable problem of how to give my son a tolerable life.

I also found a level of emotional support in Freelance Programmers that might have been harder to find in a traditional workplace. The

more established we became, the more we developed a trusted elite of top programmers and managers. Some of these – names like Jean Fox, Suzette Harold, Alison Newell, Mary Smith, Rosie Symons and Penny Tutt spring to mind – would become influential senior figures in the company over a period of many years. Some of them, as we got to know one another better, became friends.

There was one colleague in particular who became very close. Pamela Woodman was a bright, attractive woman who had been working for the Commercial Union insurance company but had had to leave because she was expecting her first child. She was unmarried – which was considered scandalous at the time – and anxious to carry on working. She was also highly qualified and motivated, and seemed to offer to the company skills that complemented mine. I hired her on the spot, and before long had been so impressed by her that I suggested that she might want to become a partner in the company. She declined, preferring the security of a salary. But she had the same ferocious commitment to her work that I had. She bought a house nearby, in Great Missenden, so that she could be on the spot, and she insisted on working right up until the final week of her pregnancy. I could hardly have asked for anyone more amenable with whom to share my workload, and from early on she was not just a colleague but a friend. Derek in due course became godfather to her daughter, Fiona Jane, and we soon got into the habit of having our most productive business discussions on long walks around Ley Hill common, with our children in pushchairs or, later, toddling along beside us. I got used to sharing my worries with her, both about work and about Giles, while she in turn used to pick my brains about computers in general and Freelance Programmers in particular.

We even took a brief holiday together, to Bournemouth: me, Derek, Pamela and our children. The first thing we did when we arrived was go and look at the sea. Giles walked straight into the waves, and Derek was only just quick enough to rescue him. The two of them were thus both soaked to the skin when we checked in to our hotel – and Pamela and I roared with laughter at what might, without her, have been rather a dispiriting incident.

It was lovely to be working with someone with whom I felt so at home, and I remember wondering if the men who ran conventional companies were able to enjoy proper, warm human relationships with

their colleagues in the same way. Not only was I able to share some of my workload with Pamela, who was a properly trained manager with great organisational skills, but I could also share some of the emotional burden that came with the work. I have always been a worrier, and the bigger the company grew the more things I found to worry about. And always, of course, beyond those worries, there was that terrible unceasing background anxiety about Giles: about what was happening to him at that moment, about what was about to happen to him, and about what would happen to him in the long run. Pamela had a practical, solution-finding approach to life that I found hugely reassuring on the various occasions when I shared this load of anxiety with her.

We made such a good team that, over the next few years, Pamela's role in the company grew and grew. By early 1969 we had established what we called a "dual management system", whereby she was more or less entirely responsible for the day-to-day running of the established part of the business, while I focused on expansion, evolution and new business.

But although I was happy to share the responsibilities of internal management, and happy to accept that Pamela knew more than I did about commercial systems, the core responsibility of the enterprise – devising, proposing and refining computerisation strategies that we could perform for our clients – remained mine. In a sense, this was creative work: not programming, not sales, not even – quite – marketing, but, rather, a kind of visualisation: looking at what companies did and what they wanted and imagining software solutions that had never been dreamed of before.

In terms of sales, I used to set myself very simple, quantifiable targets, such as making two new contacts every week and maintaining my existing contacts. That meant following up every lead, asking for introductions, writing to people, networking tirelessly, keeping half an eye always open for new opportunities. I made myself go to lots of conferences and receptions – whenever Derek was free to keep an eye on Giles. We had experienced another flurry of new business after featuring on the BBC television programme *Tomorrow's World* in March 1966, on the eve of the general election (Pat Lovelace, my then secretary, had previously worked for the show's producer), and it was clear to me that we would continue to grow only if we continued

to make ourselves visible. I remember a small item in a newspaper around that time that referred to me as "the ubiquitous Steve Shirley" – a dig that I decided to take as a compliment.

But most of my time, for several years, went on proposals. We developed a system of pink folders. Each folder represented a project and would pass between various members of our network. I would explain the basic background of the initial discussion and what the client wanted, then someone else (usually Pam Elderkin) would assess the technical implications, and someone else (often Penny Tutt) would go through our database of programmers and find out who was suitable and who was available. And then it would all come back to me and I would spend ages writing it all up into a very detailed proposal (which would then have to be neatly typed up, since there was no word-processing then). It was exhausting but enjoyable. A typical proposal would take me five hours to write, so I used to do them in the evening, when I could work without interruption.

I remember spending a holiday in Norfolk around this time. We had rented a bungalow in the countryside, with rolling fields just outside, where Giles could watch the combine harvesters at work through the windows. Every day, packages would arrive in the post from the office, containing pink folders which needed to be converted into proper proposals. Every evening, I would work far into the night, working out and writing out detailed explanations of the systems that we would create. When I eventually dragged myself out of bed the following lunchtime, I would post my finished work back to the office on my way to the beach, where Derek and Giles would already have been for several hours.

Perhaps that sounds rather a grim, obsessive way to have lived, but I have no doubt that Freelance Programmers could not have succeeded without that kind of commitment. For all the advantages of our new kind of workforce – more flexible than a traditional firm yet with a depth and breadth of expertise and support unavailable to solo freelancers – the company remained a fragile organism, with little to hold it together beyond the personality at its centre: me.

Indeed, if I had to offer a single, simple explanation for my company's survival and ultimate success, it would be just this: my hard work. For reasons that I don't entirely understand, but which I imagine are rooted in my childhood, I never slackened off for a single

day during that first decade of Freelance Programmers' existence. Yes, the core idea of the business was a good one; yes, I had a talent for programming; and, yes, I was lucky in my timing. But there were, increasingly, other software-producing companies appearing, including a few that mimicked our approach of using freelance home-based programmers. Any one of these could have taken our business; and there were, in any case, lots of other things that our clients could have spent their money on. (According to one study, in 1974 there were 80 software companies in the UK – and a mere 4,500 computers.)

What saw us through was the fact that I stuck with the idea and made it work. All those days when I worked for 12 hours rather than eight, all those weeks when I worked seven days rather than five-and-a-half, all those years when I worked through my holidays – if you add them all up over a decade, the compounded advantage is considerable. There were, as I say, others who could have succeeded instead of us. If we came out on top, it was because we gave time and energy to the challenge that our rivals were simply not prepared to give.

I don't doubt that Giles's condition had something to do with this. A whole houseful of happy children – which was what we had originally planned to have – might have been a hard distraction to ignore had they and their friends all been clamouring for my attention. Instead, the pain at home may have sharpened my hunger to ensure that one aspect of my life, at least, worked out well. Perhaps more significantly, that irreducible core of pain at the centre of my life may have given me a toughness – a relative indifference to such minor inconveniences as exhaustion or workplace stress – that I would not otherwise have had. I was used to shutting off my feelings – a skill I had first developed in my own childhood. And I knew that, whatever else happened to me, I somehow needed to make sure that Giles would always be provided for. That meant that, at all costs, Freelance Programmers had to succeed.

10: Survival Of The Fittest

By 1970, things were looking up. That, at least, is what I told myself as the old decade ended. Giles seemed contented at The Walnuts and was reasonably settled in his routines at home. Derek, while continuing his weekday commute to Dollis Hill, was gaining confidence as a hands-on father. And I was learning to switch roles, from mother to businesswoman and back, abruptly and completely; by which I mean that, whichever role I was currently in, I would banish the other from my mind. Between us, we had reached a degree of acceptance of Giles's condition, and we felt that we were now achieving a balance between giving him the care that we wanted to give him and allowing him to receive the expert care that his condition demanded.

We had also moved house. This had been prompted by the break-up of Renate's marriage and her subsequent return – along with her adopted daughter Clare – to England. We all felt that we might benefit from joining forces for a while, but there was no room in Moss Cottage for two extra people. So we put it up for sale, found a buyer quickly and moved for a year into a large rented house in Amersham, in Longfield Drive. This proved a big improvement: not just because it was more convenient but because extended family life seemed to suit Giles. He must have been six by then, and he and Clare, who was about 18 months old, developed a special rapport. He appeared to like the routines of a toddler's life, while she had a way of demanding a relationship with him – hugging him relentlessly with no thought for his indifference, or bouncing up and down in the bath as if she was taunting him with love – that occasionally provoked a hint of a response. Both of them were fascinated by the railway line beyond the garden fence, and would rush down to the end of a garden whenever a train went by. Many a tantrum was interrupted in this way, usually never to be resumed.

It was a big house, with one rather smart sitting-room that we rarely used. At Renate's suggestion, we designated this "The Good Room", kept it locked and only went in there as a special reward, when everyone was behaving in a gentle, civilized way. Sometimes it went for weeks without being entered. Eventually, however, we found that we were able to spend a surprising number of relatively extended periods in there, just sitting quietly and reading or listening to music.

Then, after about a year, we moved into a house of our own – the Old Schoolhouse – also in Amersham. Renate and Clare came with us, and Clare in due course began to go to school, and to bring back friends to play. Giles was sometimes able to sit with them at mealtimes. Life was chaotic, but it felt like the benign chaos of a big family rather than the cold, negative chaos of a life ruled by one relentlessly destructive child. Renate, who had a lifelong rapport with troubled children, was very good with Giles. Most evenings, she would more or less sit on him and read him a story, undeterred by his obvious lack of interest; and eventually this became one more piece of positive routine.

I wouldn't go so far as to say that these were happy times – it was hard to observe Clare's "ordinary" childhood without feeling occasional heart-piercing stabs of jealousy. But they were times that had happiness in them, and I was grateful for that.

My company, meanwhile, was thriving, with annual revenues of around £50,000. We were getting interesting assignments – everything from big pay and personnel systems to stock control for ice-cream vans – and with each successfully completed project it became easier to persuade the next client that we were a serious, grown-up business with a worthwhile product to sell.

I had a delightful new PA, Penny Tutt, whom I had first met years earlier when we were buying Moss Cottage: hers had been the young family renting it; and, since they had not moved far, we had stayed in touch over the years and become friends. She was not a programmer, or indeed a computer expert of any kind; but she had a common sense, feet-on-the-ground understanding of life's basics that would become crucial to the company's long-term stability, and she would soon move into a more senior administrative role.

There could be no doubt by this stage that we were a proper company rather than a cottage industry. We had hardly any employees in the conventional, full-time, office-based sense. But we had all sorts of people working for us: freelance, part-time, full-time, home-based, office-based... Altogether, we used around 100 freelance programmers and analysts on a regular basis, all working from home, with a growing number of managers and administrators either working from home or, in a few cases, based in our headquarters in Chesham. We had even had to rent new premises to accommodate this last group, across the

road at No 7 Station Road. (We gave our address as 7-16 Station Road, which sounded more impressive than it was.)

For simplicity's sake, we referred to all these people as "staff" or "the workforce" – terms that I shall use in this book. They were not, however, employees in the conventional sense.

All of us were women, apart from John Stevens. (Jim Hawkins had moved on by then.) And the media had cottoned on to the idea that we could be written about as an amazing feminist success story. Women's liberation was becoming fashionable – Germaine Greer's

The Female Eunuch was published in 1970 – and the notion of an all-woman company had begun to seem less like an abomination than a rather jolly encapsulation of the spirit of the Swinging Sixties (which, as anyone who was there will tell you, took place largely in the early Seventies).

Opinion-formers began to warm to us. (One journalist told me later than the media treated us kindly because they considered us a good source of upbeat stories.) The fashionable broadcaster Anona Winn, who since 1965 had chaired an all-female radio chat-show called Petticoat Lane, gave some of us lessons in telephone diction. The Times took to referring to us as by what it obviously thought was the rather witty nickname "computerbirds". Academics began to write about us too. I remember seeing myself described as an entrepreneur – and thinking, once I had looked the word up, "They're right. That is what I am."

The learned article that sticks in my mind today was by someone from the London Business School, who managed to include in his essay the outrageously shallow and sexist jibe: "Like many women of her ilk, she is indifferent to the appearance of her home." But most of the coverage was flattering, and, predictably, I found myself starting to believe in it. Perhaps I really was a business genius. Perhaps I really had caught the spirit of the age. Perhaps I really was set irreversibly on the path to riches.

On Christmas Day in 1970 – which we celebrated in our usual way with our old friends Frank and Doris Hewlett – I gave an enthusiastic toast to the success of Freelance Programmers. "We're flying now," I said. "Nothing can stop us now."

A few weeks later, things began to fall apart.

The first crisis was one that it had never even occurred to me to look out for: a recession. The economic downturn of the early 1970s struck early for the computer industry: two or three years before the 1973 oil shock with which it is generally associated. The computerisation of British business had got ahead of itself, and firms that had been investing heavily in IT realised – more or less simultaneously – that they needed to wait for some return on this outlay before investing further. It took a while for the orders to dry up completely, but more and more companies started to hold back, and our flow of new work slowed alarmingly. Pamela and I began to worry and resorted to our first ever mass direct mailing to drum up business. It had little effect.

Things still looked healthy from the outside. We had an impressive range of current and recent clients, including – in addition to those already mentioned – ICI Paints, Penguin Books, Glacier Metal, Watney Mann, the Atomic Weapons Research Establishment at Harwell, the Family Planning Association and the Council of the Stock Exchange (despite the fact that women still weren't allowed to work on the Exchange itself). Our work ranged from straightforward programming to more complex consultancy projects such as feasibility studies, benchmark tests, equipment selection and systems analysis. We had also been working on a big cost-sharing contract from the Ministry of Technology, creating package programmes based on British Standards for fluid-flow and design.

As the year unfolded, however, and the contracts were completed one by one, it became harder to ignore the frightening truth: new contracts were not appearing to take their place. By the end of the year, the wider economy was showing signs of faltering, and we realised that clients and prospective clients weren't just cutting back – some were actually going under. In February 1971, I managed to extract a large, late payment from Rolls-Royce two days before it went into receivership.

The suspicion dawned on me that, in developing Freelance Programmers, I might not have been nearly as clever as I had imagined. Perhaps our success had been attributable to lucky timing and had been driven simply by wider economic growth. Perhaps I should have given more thought to the fact that economic cycles can go down as well as up. Now that our luck had run out, the company's hard-earned assets were – even with our minimal overheads – haemorrhaging away.

It is easy to feel helpless in such circumstances, but Pamela and I both realised that our best hope lay in vigorous activity. We threw ourselves into finding new business – or, failing that, at least making new contacts. When work is scarce, you must network or die. I had, as it happened, been elected a Fellow of the British Computer Society and, a bit later, a Vice President (with a mission to get the society chartered status). This might sound like a tiresome distraction. It was actually an invaluable opportunity for keeping in touch with people and new developments in the industry – while my position in the Society added greatly to our credibility within the industry. Many members would at some point or another be awarding contracts of the kind we were looking for; and, when they were doing so, it was a huge advantage if I was aware of it and they, in turn, knew who we were. We wouldn't necessarily win the contract, but at least we would be in with a chance.

In a similar spirit, we formed a loose consortium, in early 1971, with three other software companies: Business Software, Applied Computer Sciences, and Programming Sciences International. We called ourselves Allied Software Houses. The idea was that, while continuing to pursue our individual businesses, we would widen the options available to us with a collaboration that would let us bid for contracts that would otherwise be too big for any of us to handle. It didn't make much difference: it was 18 months before we won our first contract. But doing almost anything – even just seeking safety in numbers – was better than doing nothing.

Around the same time – February 1971 – I launched a new company: F2. This was largely a formalisation of the “dual management system” that Pamela and I had already established, and was partly prompted by a sense that Pamela was growing frustrated with her subordinate status. She became managing director of Freelance Programmers, which continued to concentrate on the home-based programming services on which the business had been founded, while I became managing director of F2, which focused on more ambitious services such as systems analysis and consultancy. This kind of work had grown to represent around 40 per cent of Freelance Programmers’ business, and there was a certain logic in dividing the operations: not least because consultancy arguably required a more full-time, less home-based workforce. There was also – again – the attraction of being seen to do something. The last thing we needed was for potential clients to

believe that we were struggling. F2 at least got us noticed for a while. We gave the company its own address in Amersham. Ann Leach became group technical director.

To the casual observer, we appeared to be expanding. But the bottom line was that both parts of the business were struggling. The work was running out, and our hard-earned wealth was evaporating. In the 1971-72 tax year we posted a £3,815 loss. As I agonised over how much money we could afford to spend on a morale-boosting celebration of Freelance Programmers’ impending 10th anniversary, it occurred to me that this could be the last anniversary we would celebrate. If things didn't start getting better very soon, we were done for.

Instead, they got worse. I arrived in the office in Chesham one summer morning to find a letter from Pamela. She was handing in her notice. A series of fraught conversations, with her and with others, revealed that that was not all. She was setting up a rival company, Pamela Woodman Associates, to carry out exactly the same kind of business as Freelance Programmers, in exactly the same market. She was also approaching most of our best programmers to invite them to work for her and (it emerged later) offering their services to the same prospective clients that I was targeting.

People with long experience of the tooth-and-claw struggles of the business jungle tell me that such breakaways are simply a painful fact of life; some experts say that it is surprising that they do not happen more often. Young companies in hi-tech sectors are particularly vulnerable to them, because the talent they employ forms such a large part of their assets. I am sure that this is true. But for me Pamela’s breakaway wasn’t just a set-back: it was a brutal, horrifying shock, like a kick in the stomach. I felt – perhaps unfairly – that it was a monstrous betrayal.

Part of the joy of the first decade of Freelance Programmers had been its loose, informal structure. We were all highly skilled, in a sphere that required the most precise, disciplined and logical thinking. Yet our way of organising ourselves had been largely improvised and intuitive – one might almost say “feminine”, in contrast to the rigid structures and conventions of the traditional masculine business model. Paradoxically, this looseness had also made the company quite centralised, because the invisible ties that held it together came mostly from me and my personality. Perhaps it was this that Pamela and her fellow-defectors wanted to escape. The fact that they did so made me

feel that I was under personal attack, and that my world was collapsing around me.

I can see, nearly 40 years on, that Pamela was perfectly entitled to have her own ambitions and to do anything legal to further them. But I have never recovered from the disillusionment – and especially not from the realisation that, even as we had been sharing our dreams for the company's future, she had been plotting a move that she knew might destroy it. This did something to me as a person. I still find it hard to take friendship at face value, and I have allowed very few other work relationships, no matter how satisfactory, to become proper friendships.

In the short term, however, it was not just an emotional blow. It was a catastrophe for the business. Overnight, we had lost many of our most skilled and experienced programmers and a large slice of our future business, at a time when we could least afford to do so. I had also lost some of our best project managers – including the highly valued Suzette Harold (mentioned before as the early programmer suspected by the Inland Revenue of running a house of ill-repute). And of course Pamela had almost as good an idea as I did about which parts of our business were most profitable, which clients we were planning to approach, what sort of ideas we were intending to discuss with them, and what kind of prices we were likely to quote. From her point of view, we were sitting ducks.

I say “we”. To all intents and purposes, the burden of this crisis fell on me. Most of our programmers kept themselves aloof from the schism, making themselves available to whoever booked their services first. Some made a point of rejecting Pamela’s advances, out of loyalty, and several offered emotional support and encouragement. But as far as I was concerned there was no one else who was “under attack” and no one else who was actively involved in the question of the business’s survival. All sorts of people offered helpful advice, but I don’t think I really listened to any of it. I was the one who decided what costs could be cut, I was the one who had to cut them and deal with the consequences of doing so, I was the one who had to ensure that the positive morale that had helped drive our expansion did not now turn into a hopeless fatalism – and I was the one who somehow had to find the time and strength, amidst all this, to carry on going out in search of new business.

Every day, throughout every waking hour, I was working at frenetic, breathless speed. I felt constantly as if my heart was in my mouth, as if my very life depended on my making the best possible use of every minute. And in a strange kind of way, I relished it – as if the adrenalin were addictive. This, I said to myself, was my big moment, my Battle of Britain. Anyone who thought I would give up without a fight was very much mistaken.

In the outside world, conditions worsened – and carried on worsening. January 1973 saw a huge stock market crash. In October 1973, the OPEC nations’ anger at US support for Israel in the Yom Kippur war led to a devastating rise in oil prices. In 1974, a crash in UK commercial property prices provoked a medium-sized banking crisis. By 1975, UK inflation was touching 25 per cent. If we had relied on economic recovery to save us, we would have gone out of business.

Instead, we fought. I drastically reduced our staff of full-time managers. I quietly reabsorbed F2 (after a decent interval) into the main company. I resumed the overall managing directorship, while Frank Knight – whom Pamela had brought on to the board from Commercial Union in 1971 – remained chairman. I also did most of the clerical and administrative work, and all the sales, and, it seemed, more or less everything else. Treating every day as a battle for survival, I explained to each remaining member of our panel that work was in short supply and that they were likely to earn little or nothing from Freelance Programmers for the foreseeable future – but that I still earnestly hoped that our long-term relationship with them would continue. I started looking for ways to replace our disparate bases (at my home in Amersham and on both sides of the high street in Chesham) with a single, cheaper premises in Chesham. In short, I developed a liquidator’s mentality, getting rid of almost anything that could be got rid of, until there was scarcely anything left of the company but its name and its core ideas.

The personal cost was huge, but perhaps there was no other way to survive such a storm than by taking the battle personally. To me, this was no longer just a financial matter. It was about me and my dream. I had come up with a kind of business that no one had imagined before, and had run it in a way that the small-minded traditionalists who blocked women’s career paths in the conventional workplace considered mad. If the company failed, the whole idea would be

discredited: the idea that companies could be run on trust, the idea that women had as much to contribute as men – and the idea that I was a proper businesswoman rather than just a dreamer who had got lucky.

I realised by now that, in a sense, I had got lucky. But I also realised, as never before, just how much I cared about the business. Drawing conscious inspiration from the way Britain had stood alone in the Second World War, I resolved that, no matter how bad things got, I was not going accept defeat.

One incident that illustrates my embattled mentality at the time had nothing to do with the business. I was driving one morning along a familiar country lane near Amersham and noticed that a huge swastika had been painted on the outside wall of a remote farmyard.

{The National Front was enjoying a brief spell of headline-making popularity.) My first reaction was horrified panic, as old wartime fears were re-awakened. My next was to take control of the situation. I found the farmer and told him how offensive the symbol was to me. He shrugged and said that it was nothing to do with him. So I visited the local police station, who, in turn, shrugged and said that it was nothing to do with them either. Finally, having toyed with the alternatives of (a) embarking on a lengthy correspondence with the relevant department in the local council or (b) letting the whole thing lie, I realised that there was only one thing for it. I bought a large tin of paint, got up at 4am the next morning and, shortly before dawn, painted over the offending symbol myself.

I mention this episode of arguably delinquent behaviour because it shows just how fired up I was. (It also reminds me how much energy I then had.) In my mind, my fight for business survival had become part of a much wider fight to defend everything that I held dear: my business dream, my family, my gender, my values. “Never give in,” Winston Churchill had said, in a much-quoted speech in 1941 – “never, never, never, never, in nothing great or small, large or petty; never give in except to convictions of honour and good sense...” It had worked for him. It might just work for me.

It was a crucial advantage, in the struggle to keep Freelance Programmers alive, that we had few fixed costs, and that many of our regular freelancers were used to surviving on an irregular income. Most of them seemed to understand that this was the flipside of flexible employment: there was little or nothing to shield our workforce from

the economy’s icier winds. The fact that many of them had not been employed before we came along made it easier for all concerned to accept that the company’s pain had to be shared. This didn’t make it less painful, but it gave us a fighting chance of survival.

Derek was unfailingly supportive too, as he always has been. But I don’t think he really realised quite how bad things were. That £3,815 loss in 1971-72 sounds petty by modern standards, but in our terms it was huge. The company had next to no assets, and there was nothing with which to cover further losses apart from our personal wealth – which, given that we were already double-mortgaged, was negligible. If we did not get back into profit the following year, that would be the end of our story.

At one point the F2 side of the business was down to a single contract – with Unilever. Yet still, somehow, we refused to give up, keeping our spirits up by putting an extravagantly positive spin on things. For example: back in 1969, when business was booming, Derek had persuaded me to mark our tenth wedding anniversary by splashing out on an extravagant fur coat. It was second-hand but gorgeous, in dark leopardskin with a beautiful black mink collar; I had imagined that I would wear it on special occasions but in practice had never had an opportunity. Now, having briefly considered selling it (it might have raised anything up to about £1,000), I took to wearing it every day – so that anyone who saw me would assume that the company was still prospering.

Morale seemed to me to be a crucial issue. In business, as in life, good things rarely come to those who appear desperate. I was determined to put everything in a positive light – even our 10th anniversary party, which took place just days after the launch of Pamela Woodman Associates. I smiled bravely through the champagne reception, which we held at the Institute of Directors in Pall Mall, and was rewarded with some positive press coverage the following day.

Everyone – well, all three of us who remained in the office – entered into the spirit of things. My part-time secretary, Muriel Messider, epitomised our collective attitude when one of our few, precious customers rang up with a query about an invoice. “Would you mind telling me the invoice number?” she asked, before making a huge song and dance about tracking it down among an imaginary department full of other invoices.

Those were difficult days. Yet, as sometimes happens when you have your back to the wall, there was a grim pleasure to be taken from the daily battle. And, the harder the fight, the greater the pleasure to be taken from occasional victories – such as the day in 1973 when a very sheepish Suzette Harold rang up, asking if she could re-join us. Several colleagues were aghast when I said yes. But my view was, and is, that people should be allowed to make big mistakes – or one big mistake at least. Few of us are infallible, and the brightest people learn their most important lessons from the things they get wrong. I certainly never regretted giving Suzette another chance. By May 1974 we had appointed her to the board.

Bit by bit, we began to believe that we would pull through. We ended the 1972-73 tax year back in the black, with profits of just under £2,000, on hugely reduced turnover, and the sense that my hard work was making a difference proved highly motivating. I spent a lot of my time on the then unheard-of practice of telephone marketing: not cold-calling, but ringing round existing contacts just in case any opportunities were in the air. I had a crude but effective system of little cards, each summarising what I needed to know about each target (e.g., name of company, name of the person I was dealing with, what sort of equipment they had, what we had last talked about, and so on), and I felt proud of my ability to make a large number of effective calls in quick succession. Only a tiny percentage yielded so much as an appointment to meet – but without that handful of positive results we would have had no new business at all.

We also looked further afield for openings, in the US and in continental Europe. When I formally reabsorbed F2 into Freelance Programmers, I had given their controlling company the grand-sounding new name of F International. The “F” was an echo of the original “Freelancers”, although I liked to say that it also stood for “female”, “flexible” and, indeed, more or less anything else that people wanted it to stand for. The “International” was more problematic. We had, at that stage, had only one truly foreign client: an Antwerp-based company called Agencie Maritime Internationale (who became so exasperated by our well-meaning attempts to translate all our documents into French that they pleaded with us to leave them in English). But “International” sounded good, and we decided to start looking for opportunities overseas. I remember gate-crashing a big

insurance industry function in Paris with Frank Knight around this time: I felt terribly embarrassed doing it, but Frank was well-connected in the insurance industry, and we felt that we couldn't afford to neglect even the remotest chance of making a useful contact. The short-term benefits to the company were minimal, but such thinking would ultimately yield considerable dividends, and, in the meantime, it did wonders for morale to be thinking in terms of expansion rather than contraction.

Eventually, after extensive market research across Europe, we set up a small subsidiary in Denmark, whose manager, Charlott Skogøy, ran a team of seven (six of them mothers with young children) from her stylish home in Fredensborg, near Copenhagen. The adventure contributed little to our finances but did teach us valuable lessons – not least about the perils of market research if you don't interpret it correctly. We had chosen Denmark on the basis that it had one of Europe's most educated and numerate female populations, which meant that we ought to be able to recruit plenty of top-quality programmers. What I hadn't taken into account was that Denmark was so far in advance of the UK in terms of equal opportunities, with an excellent state-funded childcare system, that there was nothing like the untapped reservoir of frustrated female talent that we had found at home. Talented Danish women who wanted to work tended to be in jobs already.

The whole venture was fraught with problems – including the breakdown of our relationship with Charlott, who eventually formed a breakaway operation. But at the time that scarcely mattered. The important thing was that we believed in ourselves again. We were growing. We were no longer clinging on by our fingernails. Instead, we had (as Franklin D Roosevelt had urged Americans to do during the Great Depression) converted retreat into advance.

The creation of a further subsidiary in 1976, in the Netherlands, brought with it a different set of unanticipated local difficulties, chiefly relating to employment protection legislation – which played havoc with our traditionally relaxed approach to freelance hiring. But, again, there was symbolic value in the fact that we were still growing. Back in the UK, potential clients that had hesitated to do business with a struggling little company from Chesham felt quite differently about

hiring a fast-growing concern that appeared to be a major international player.

There was never a recognisable moment when our troubles ended. We just carried on struggling, week after week, and the weeks turned into months and the months into years, and somehow we always managed to return some sort of profit at the end of each year, however pitiful. Eventually I began to feel that, since the crisis hadn't killed us off, it must have made us stronger. I don't think I ever again felt entirely relaxed about the future. But I did begin to contemplate our prospects with more equanimity.

Unfortunately, my troubles were by no means over.

11: The Great Crash

By 1975, the worst of the economic storm was over. A blizzard of red tape came fluttering in behind it. More or less simultaneously, the Department of Health and Social Security and the Inland Revenue began to take what seemed to us to be an oppressive interest in our affairs. Both were exercised by the unorthodox nature of our employment arrangements – and had decided that now was a good time to call us to account. We wondered if the large job we had just completed for the DHSS – compiling an early database called CUBITH – might have drawn us to their attention.

I have no intention of revisiting the detail of these tiresome episodes, or of the endless correspondence and interrogations they involved. I would merely say that I resented them. Both inquiries concluded that we had done nothing wrong. But both seemed to be predicated on the idea that our flexible approach to employment in some way constituted "cheating". This seemed to me an outrageous view to take of an approach that had brought rewarding work to a whole class of people who had hitherto been entirely excluded from the workplace. And what seemed scarcely less outrageous was the thought that my taxes (and those of my flexible workforce) were funding a series of bureaucratic intrusions that were scarcely less debilitating for the business than the recession. Had the various inspectors involved made such exorbitant demands on our time and woman-power a year or two earlier, it might well have finished us off. I shudder to think how a smaller or weaker company would have coped.

But one of that year's run-ins with the state provoked a more ambiguous response. In November, the Sex Discrimination Act was passed. You might have expected me to applaud such a landmark in the struggle for gender equality at work; and with part of my soul I did. But in our case, as several commentators enjoyed pointing out, the legislation had an effect almost diametrically opposite to the one intended. We were one of the few companies in the UK that already provided real opportunities for women who wanted to work. Now our policy of "providing careers for women with dependants" was illegal.

It caused us no difficulties to make the necessary amendment to our methods of working. I had never objected to hiring men, and, indeed,

there had rarely been a moment in our history when we hadn't had a few men working for us. In 1975, all but three of our 300-odd freelance programmers were women, and all 25 of our project managers were women, but nearly a third of our 40 or so systems analysts – on the F2 side of the business – were male. (Our Netherlands subsidiary even had a staff member who had started off as a woman and then had a sex change.) Conversely, I don't suppose we would have ended up with a radically different gender profile had we never explicitly espoused a pro-women policy. The preponderance of women working for the company was partly a reflection – the mirror-image – of the gender bias in the wider workforce. Most male programmers of sufficient calibre were already in conventional employment and had no interest in the kinds of opportunity we offered.

None the less, it was a striking irony – and one that rather irritated me – that, because we mentioned gender in our mission statement, we became one of the first companies to be brought into line by this landmark piece of pro-women legislation. I don't think Freelance Programmers had been a consciously feminist organisation when I founded it. I hadn't even heard of "feminism" in 1962. But by 1975 F International was seen by many as part of the women's liberation movement. One of the things that had helped us through the dark days of the recession was the conviction that we were working not just for money, but because we believed in a particular way of doing business. And I, at least, was convinced that, in fighting to save the company, I had also been leading a crusade for women. Without that idealism I might have found it easier to throw in the towel.

Now, as the realisation dawned on us that the company had survived the storm, I think we became collectively even more aware of our feminine identity as an organisation. We had, we realised, come through a test that countless "male" organisations had failed. Surely the fact that we were women – and ran our organisation in a distinctively different way – had something to do with this?

I felt strongly that my "female" approach, which had attracted such scorn in the business's early years, had been vindicated, and it irked me that the state, in addition to its other meddlings, had now declared that approach illegal. Still, there was no point in quarrelling with the law, especially such a well-intentioned one. At a board meeting that December we amended our personnel policy again. Our purpose was

now to provide employment for "people with dependants unable to work in a conventional environment".

It felt like an important landmark in our history, marking the end of our 13-year adventure as an "all-women company" but also seeming to draw a line under the trials of the previous five years. Times were still hard, but businesses were starting to invest in the future again, and our survival no longer seemed in doubt. We had got back into the habit of ringing up freelancers to offer them work, while our core of permanent staff seemed stronger than at any point since Pamela's defection – a fact that I recognised at around this time by making Suzette Harold group managing director in my stead. In so far as all can ever be well with a business, all seemed well with F International.

As any woman with a demanding career will tell you, however, what happens in the workplace is only half the story. And in my case, the other half of the story had taken a turn for the worse.

In the summer of 1974, Giles had finished his time as a weekly boarder at his special primary school. It was a sad moment for all concerned. They had understood his needs at The Walnuts, and had had the time, the patience and above all the staff to manage his idiosyncrasies. We had been dreading the moment when his time there came to an end, as had the school, who kept him on until the latest possible moment. He was loved there – they used to call him their "ewe lamb" – and it was hard to believe that we would ever find another institution that would care for him so well.

In fact, it turned out to be hard to find another institution that would care for him at all. We tried him at a succession of day placements, from the general to the specialist, but none could cope with his increasingly difficult behaviour. He had, after all, been legally classed as "ineducable". Others gave blithe reassurances that all would be well, only to find that it wasn't. I grew to dread the almost inevitable phone call that would come a few hours after I had dropped him off somewhere, saying that they couldn't manage him and (through gritted teeth) please would I come and collect him, now.

Unfortunately, puberty had hit Giles like an out-of-control lorry. It does so with many autistic boys – and, to a lesser extent, with boys generally. In Giles's case, the hormonal turmoil turned what had been an almost benign eccentricity into a raging nightmare of unpredictable violence against inanimate and animate objects, including his parents